



Appl. No. 10/635,489
Amendment dated: June 20, 2005
Reply to OA of: February 18, 2005

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims:

1(currently amended). A method for transforming an amorphous silicon layer into a polysilicon layer, comprising:

providing an amorphous silicon substrate, and doping said amorphous silicon substrate with an inert gas atom, wherein said amorphous silicon substrate comprising an amorphous silicon buffer layer and an amorphous silicon layer on said amorphous silicon buffer layer; and

heating the surface of said amorphous silicon substrate by heat treatment or thermal process.

2(original). The method of claim 1, wherein said inert gas atom is selected from a group consisting of helium, neon, argon, krypton, xenon [[and]], radon and mixtures thereof.

3(original). The method of claim 2, wherein said inert gas atom is argon.

4(original). The method of claim 1, wherein the atom percentage of said inert gas atom in said amorphous silicon substrate is in the range of from 1 to 0.001.

5(original). The method of claim 1, wherein said inert gas atom is doped by plasma doping.

6(original). The method of claim 1, wherein said inert gas atom is doped by chemical vapor deposition.

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Claim 7(canceled).

8(original). The method of claim 1, wherein said polysilicon substrate is a panel of a liquid crystal display.

9(original). The method of claim 1, wherein said heat treatment is an excimer laser annealing.

10(original). The method of claim 9, wherein the process window of said excimer laser is in the range of from 300 to 450 mJ/cm².

11(new). The method of claim 1, wherein said amorphous silicon buffer layer is formed by plasma enhanced chemical vapor deposition.